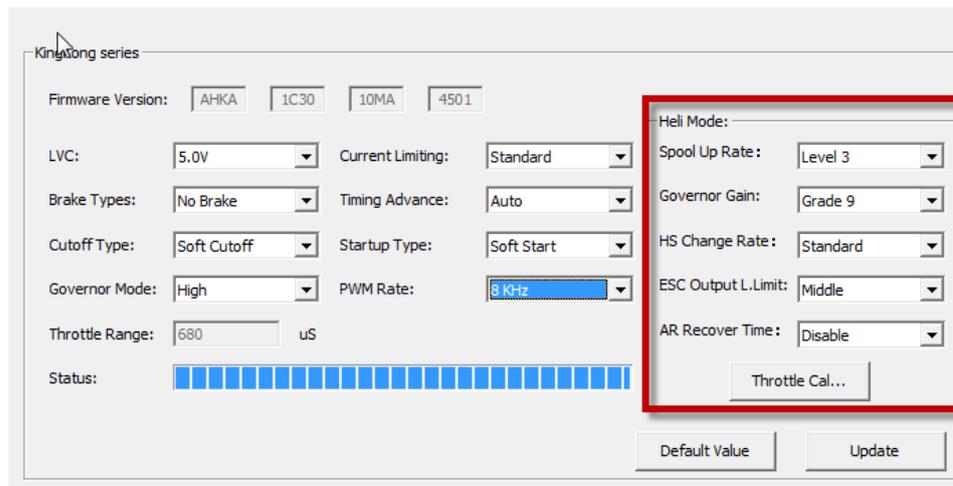


Heli Mode Instruction for HiFei KII&GII ESC

Dear Customers, HiFei TEAM special added the Heli Mode options in the last HiFei V4.11 software, so far it is just available with the series of HiFei KII&GII. The Heli Mode options will make it easy to compatible your helicopter and maximize your helicopter's performance.

Please Note: Heli Mode will be enable only when the Governor High/Low is selected.



Spool Up Rate

It indicates the startup spool up rate, the default setting is Level 3, higher level numbers means to approach the head speed faster.

Governor Gain

The default setting is grade 9, the higher grade number means the higher gain.

Head Speed Change Rate

The default setting is standard, this setting indicates the change rate between 2 different head speed switching (for example, throttle curve switch up from Normal to Idle1 or Idle1 to Idle2 ,vice versa).

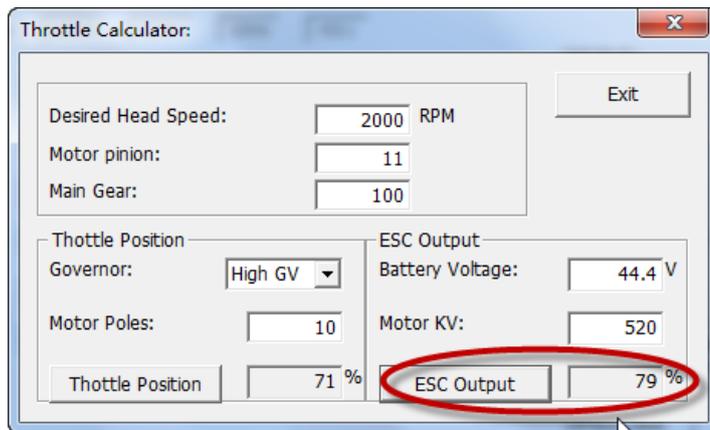
The "Head Speed Change Rate" value also determines the speed at which the head recovers.

ESC output L.Limit (ESC output Low Limit)

The default setting is 'middle', it can be understood as a low limit that ESC output the power to motor, also you can consider it as the car idle. In hard 3D fly it will be efficient to avoid lost power momentarily.

If you just fly in hover, we suggest to program it to 'the lowest'.

If you fly in very hard 3D you can program it to 'high', but please make sure the ESC output will be great than 70% corresponding to the head speed (ref the following throttle calculator and table to program the 'ESC Output L.Limit' correctly).



<i>ESC Output L.Limit</i>	<i>ESC output @ preset Head-Speed</i>
The Lowest	> 40%
Low	>50%
Middle (default)	>60%
High	>70%

AR Recover Time

Autorotation Recover Time, it also can be understood as the recover time from Autorotation (TH=0) to Normal mode. The default setting is 'Disable', it indicates the AR is inactivated.

10 to 60 Secs can be optioned to determine the recover time that Autorotation is activated, for example if you program the AR Recover Time to 30 secs, the AR will be available WITHIN 30 secs, in this period the motor can be ramped up to a preset head speed instead of soft startup, but more than this time (>30 seconds) will lead to the motor engaged with soft startup.

Throttle Calculator

It is a calculator to help you calculation the throttle curve according to your desired HS, Gear rate and motor poles. Please see the following screenshot:

The screenshot shows a software window titled "Throttle Calculator" with a close button (X) in the top right corner. The interface is divided into several sections:

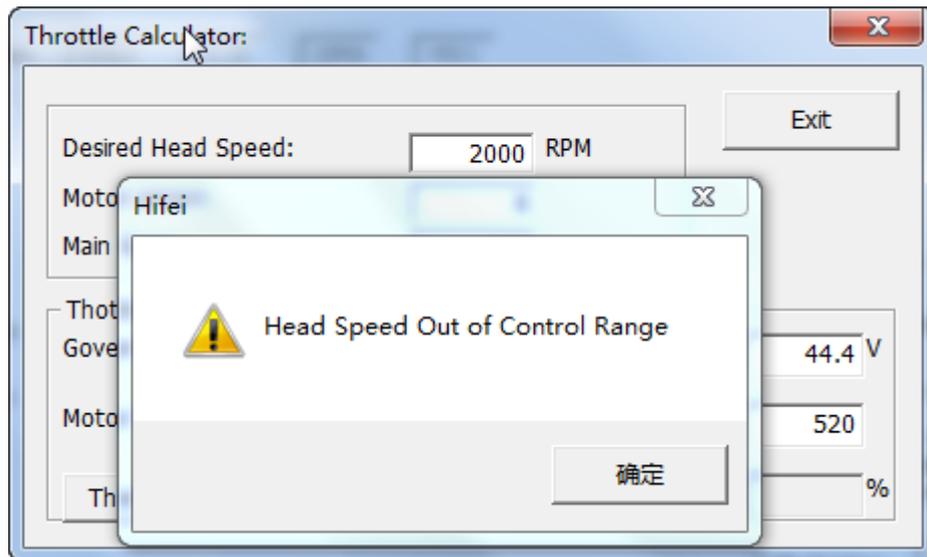
- Input Section:** Contains three input fields: "Desired Head Speed" (2000 RPM), "Motor pinion" (11), and "Main Gear" (100). An "Exit" button is located to the right of these fields.
- Throttle Position Section:** Includes a "Governor" dropdown menu set to "High GV" and a "Motor Poles" input field set to 10.
- ESC Output Section:** Includes a "Battery Voltage" input field (empty) and a "Motor KV" input field (empty).
- Output Section:** At the bottom, there are two buttons: "Throttle Position" (displaying 71 %) and "ESC Output" (displaying %).

Furthermore, fill out the battery voltage and motor KV can help you find out the ESC power output match with the pre-set head speed, HiFei recommends for optimum the ESC output to motor about 80% power, it ensure the ESC has enough reserve to compensate the battery voltage decreasing and load changing. Please see the following screenshot:

This screenshot shows the same "Throttle Calculator" window, but with additional values entered:

- The "Battery Voltage" input field now contains "44.4 V".
- The "Motor KV" input field now contains "520".
- The "ESC Output" button now displays "79 %".

Incorrect gear rate/motor KV probably results the ESC Output haven't enough reserve to compensate battery voltage decreasing and load change, in the case there is a tab pop out to indicate 'Head Speed Out of Control Range'. Generally you can Inc/Dec the tooth of motor pinion or Inc/Dec the Desired Head Speed to get the best match results. Please carefully check your heli configuration, make sure the desired head speed is under control



If you have any question with Heli Mode options, please shoot email to: info@hifei.com

Fan Flying
HiFei TEAM